following account is extracted by the author from Dr. Hooker's work: "The Welwitschia is a woody plant, said to attain a century in duration, with an obconic trunk about two feet long, of which a few inches rise above the soil, presenting the appearance of a flat two-lobed, depressed mass, sometimes (according to Dr. Welwitsch) attaining fourteen feet in circumference (?), and looking like a round table. When full grown it is dark-brown, hard, and cracked over the whole surface (much like the burnt crust of a loaf of bread; the lower portion forms a stout tap-root, buried in the soil, and branching downwards at the end. From deep grooves in the circumference of the depressed mass two enormous leaves are given off, each six feet long when full grown, one corresponding to each lobe; these are quite flat, linear, very leathery, and split to the base into innumerable thongs that lie curling upon the surface of the soil. Its discoverer describes these same two leaves as being present from the earliest condition of the plant, and he assures me that they are in fact developed from the two cotyledons of the seed, and are persistent, being replaced by no others. From the circumference of the tabular mass, above but close to the insertion of the leaves, spring stout dichotomously branched cymes, nearly a foot high, bearing small erect scarlet cones, which eventually become oblong and attain the size of those of the common spruce-fir. The scales of the cones are very closely imbricated, and contain when young and still very small, solitary flowers, which in some cases are hermaphrodite (structurally but not functionally), in others female. The hermaphrodite flower consists of a perianth of four pieces, six monadelphous stamens with globose three-locular anthers, surrounding a central ovule, the integument of which is produced into a styliform sigmoid tube, terminated by a discoid apex. The female flower consists of a solitary erect ovule contained in a compressed utricular perianth. The mature cone is tetragonous, and contains a broadly-winged fruit in each scale."

Barrois' Embryology of Nemertean Worms[1].—The author of this work is well known for his labors on the developmental history of sponges. His aim in the present essay is to give as complete a history as possible of the normal development of a group of nemertean worms. These are low, in the adult state, non-segmented worms with a wonderfully extensile body, whose young are in some cases (though not in those mentioned by the author) related in form to those of the true Annelids, being segmented. M. Barrois concludes from a study of the development of a number of genera (*Lineus, Amphiporus, Tetrastemma, Polia,*

[1] *Mémoire sur l'Embryologie des Nêmertes.* Par M. Jules Barrois. (Annales des Sciences Naturelles, Sixtième Série. Tome vi. Paris, 1877.) 8°, pp. 232, with 12 plates.

Cephalothrix, *Drepanophorus*) that they pass through three principal stages.

I. A bilateral Gastrula-form.

II. A Gastrula, with the middle layer (mesoderm) arising from the exoderm, and composed of two principal rudiments: (1) the muscular layer, thin and uniform; (2) the recticulum, extending through the entire body-cavity, and represented in the embryos of *Lineus obscurus* by oil globules.

III. The longitudinal layer is enlarged in advance of the lateral organs into a solid mass; the nervous system arises over all the internal extent of the layer thus complicated. The internal cavity is divided into a system of cavities separated by partitions, all along which the reticulum is applied in a continuous layer.

These three states, which may be successively observed in the embryo of a nemertean worm, appear to exist in a more explicit way in Prorhynchus, where state II seems to be represented by an adult, free-living Planarian. The Nemerteans, then, appear to have derived from a sudden modification of the Planarian type, and justify, in the author's opinion, the establishment of homologies between the two groups.

THOMAS' NOXIOUS INSECTS OF ILLINOIS[1].—This interesting report is divided into two parts, the first relating to horticultural entomology, and the second comprising the introductions to and first part of a manual of economic entomology for the State of Illinois, including the Coleoptera. The first part contains excellent advice concerning the best means of contending against insects injurious to the orchard, especially general and preventive remedies, which are always the best and usually the last to be applied. Considerable attention is bestowed on the birds found to be useful in the orchard, and a list is given of the most important species. The report will prove very useful and timely to the farmers and gardeners of Illinois, for whose sole use it has been compiled.

CONTRIBUTIONS TO THE FOSSIL FLORA OF THE WESTERN TERRITORIES. PART II. THE TERTIARY FLORA. BY L. LESQUEREUX.[2]—In this important work Prof. Lesquereux gives to the world the results of many years of laborious investigation of the remains of plants which have been discovered in the later horizons of the Rocky Mountain region from the Laramie formation upwards, by the U. S. Geological Survey under Dr. Hayden, and by Messrs. Berthoud, Le Conte, Denton and Allen, Profs. Lakes and Cope, Lieut. Vogdes and others. After considering the stratigraphy of

[1] *Sixth Report of the State Entomologist on the noxious and beneficial Insects of the State of Illinois.* The first biennial Report. By CYRUS THOMAS, PH.D., State Entomologist. Springfield, Ill., 18 7, 8°, pp. 174, iv, ii.

[2] *Report of the United States Geological Survey of the Territories.* F. V. HAYDEN, U. S. Geologist-in-charge. Vol. vii. 4to, pp. 366. 1878.